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Bahman Angoshtari* (bango@umich.edu), Department of Mathematics, University of Michigan,
2074 East Hall, 530 Church Street, Ann Arbor, MI 48109-1043, and Thaleia Zariphopoulou and
Xun Yu Zhou. Predictable Forward Investment Preferences.

We introduce a new class of investment preferences called Predictable Forward Investment Preferences (PFIP). These preference are motivated by the so-called Forward Investment Preferences (FIP) introduced by Musiela and Zariphopoulou (2006), in the sense that the risk preferences are stochastic and updated forward in time. However, unlike FIP, the updating of PFIP occurs in discrete-time.

In the binomial market setting, we establish the existence of PFIP through a constructive argument. In particular, we show that in the interval between two subsequent updating of preferences, the investor faces the inverse of the classical Merton investment problem, i.e. when the value function is given and the terminal utility function is to be found. We reduce this inverse problem to an iterative (i.e. single variable) functional equation and provide existence and uniqueness conditions for the its solution. This functional equation is the counterpart of the stochastic partial differential equation that characterizes FIP. (Received January 06, 2016)